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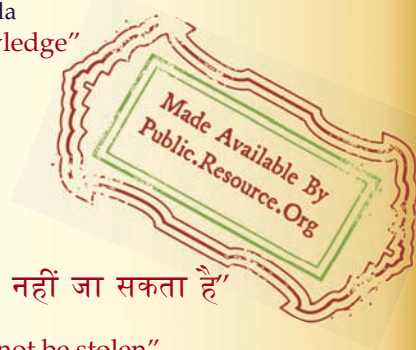
IS 5200 (1998): Bolt Clippers [PGD 5: Assembly Hand Tools]



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“Knowledge is such a treasure which cannot be stolen”



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भारतीय मानक  
काबला छीलक — विशिष्टि  
( पहला पुनरीक्षण )

*Indian Standard*  
BOLT CLIPPERS — SPECIFICATION  
( *First Revision* )

ICS 21.060.10; 25.100.99

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**BUREAU OF INDIAN STANDARDS**  
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NEW DELHI 110002

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Price Group 2

## FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Assembly Hand Tools Sectional Committee had been approved by the Production Engineering Division Council.

This standard was first published in 1969. This revision has been taken up to bring this standard in line with the International practices and to incorporate functional improvements which have taken place in latest versions of the product.

In this revision, the Type 'B' has been deleted since the other Type 'A' is considered more effective, efficient and easy to handle the product and universally acceptable.

While revising this standard assistance has been derived from the following documents:

- a) TGL 4387-1966 Straight cut bolt clippers (Standards Body of German Democratic Republic).
- b) Drg No. IND/GS/314(b) Clippers, bolt, Chief Inspectorate of General Stores (Ministry of Defence), Kanpur.
- c) JIS B-4643-1984 Bolt clippers (Japanese Industrial Standards Committee).

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2:1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

# Indian Standard

## BOLT CLIPPERS — SPECIFICATION

### ( First Revision )

#### 1 SCOPE

This standard covers the dimensions and other requirements of bolt clippers.

#### 2 REFERENCES

The following standards contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

IS No.	Title
1161 : 1979	Steel tube for structural purposes (third revision)
1570 : 1961	Schedules for wrought steels for general engineering purposes
1875 : 1992	Carbon steel billets, blooms, slabs and bars for forgings (fifth revision)
2500 (Part 1) : 1992	Sampling inspection procedures: Part 1 Attribute sampling plans indexed by acceptable quality level (AQL) for lot-by-lot inspection (second revision)
3748 : 1990	Tool and die steels (second revision)

#### 3 MATERIAL

**3.1** The bolt clippers shall be manufactured from any suitable material so as to fulfil the requirements laid down in **4.1** and **8.1**.

**3.1.1** One of the suitable material for the manufacture of component parts of the bolt clippers is given below:

Part	Material
a) Cutting Jaws	T40 Ni6 Cr4 Mo3 of IS 3748
b) Tubular Handle	MS Tube ERW/Seamless of suitable diameter for each size of IS 1161
c) Joint piece of Bolt Clippers (drop forged)	45C8 of IS 1875
d) Grip (die-moulded) Rubber (synthetic)	

#### 4 HARDNESS

The hardness near cutting jaws of bolt clippers shall be maintained within the range of 660 to 750 HV (58 to 62 HRC).

#### 5 DIMENSIONS

The main dimensions of bolt clippers shall be as given in Table 1.

#### 6 MANUFACTURE, WORKMANSHIP AND FINISH

**6.1** The bolts and nuts used in the assembly of bolt clippers shall be hexagon type. Each bolt shall be firmly secured and the blades shall open smoothly and evenly. Handle of the bolt clippers, shall be shrunk into the joint piece or jointed strongly by other means to the tubular handles. The fish plate may be machined to a good finish.

**6.2** The jaws shall be drop-forged and free from cracks, burrs, scales, etc, and shall be finished true, smooth and bright. The cutting edges shall be suitably hardened and tempered and shall be ground to have sharp edges. The joint piece is so designed as to enable adjustment of gap between blades to carry out specific jobs and resetting of cutting edges after sharpening as and when necessary.

**6.3** The bolt clippers shall be free from flaws; such as cracks burrs, rust and other defects and shall work without any undue play or friction.

**6.4** All the component parts except the cutting edges may be painted with anti-corrosive paint. The cutting edges shall be bright finished and lacquered.

#### 7 SAMPLING

Suitable sampling plan as per IS 2500 (Part 1) may be selected as agreed between buyer and seller.

#### 8 TESTS

##### 8.1 Cutting Test

The bolt clipper shall cut a test bar having a hardness value of 125 HV to 160 HV and of diameter as indicated in Table 2. The load shall be applied at a point 100 mm from the end of the handle. At the end of the test, there shall be no visible signs of cuts or dents on the cutting jaws of the bolt clippers.

## IS 5200 : 1998

8.2 The bolt clippers shall be examined for dimensions, manufacture, workmanship and finish. Any bolt clipper failing to meet the requirements for anyone or more of the characteristics shall be considered defective.

## 9 DESIGNATION

9.1 The bolt clippers shall be designated by:

- commonly used name;
- nominal size; and
- number of this standard.

### Example

A bolt clipper of normal size 600 mm shall be designated as:

Bolt Clipper IS 5200 — 600

## 10 PACKING

10.1 The bolt clippers shall be suitably packed in accordance with the best prevalent trade practices.

## 11 MARKING

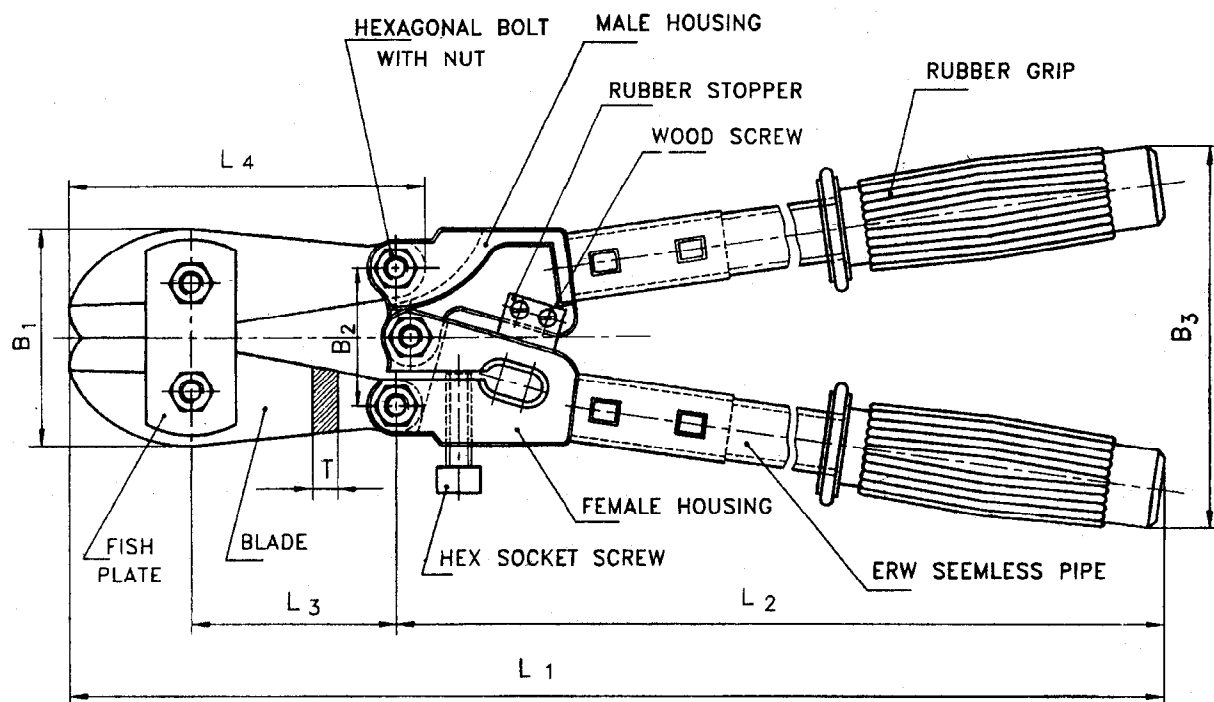
11.1 The bolt clippers shall be marked with manufacturer's name trade-mark, nominal size in mm.

### 11.2 BIS Certification Marking

Each bolt clipper may also be marked with the Standard Mark.

11.2.1 The use of the Standard Mark is governed by the provision of *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

Table 1 Dimensions for Bolt Clippers  
(Clause 5)



Nominal Size	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	T	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	Cutting Capacity Diameter, Max
300					310				
350	55	40	105	6.0	350	225	50	90	4
450	73	47	155	9.5	460	350	68	119	6
600	90	52	195	11.0	600	470	86	147	10
750	102	63	206	12.0	750	590	98	172	12
900	110	73	235	13.0	915	750	110	187	14
1 050	125	82	270	14.0	1 070	850	130	215	16

**Table 2 Diameter of Test Bars**  
(*Clause 8.1*)

Nominal Size of Bolt Cliper mm	Diameter of Test Bar mm	Cutting Load, <i>Max</i> kgf
300	4	15
350	5	25
450	6	35
600	8	50
750	10	70
900	13	100
1 050	16	150



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This Indian Standard has been developed from Doc: No. PE 05 (0122).

### Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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